



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,059	03/15/2001	Markus Probst	ZIP 2216	7274
7812	7590	04/23/2004	EXAMINER	
SMITH-HILL AND BEDELL 12670 N W BARNES ROAD SUITE 104 PORTLAND, OR 97229			LUU, THANH X	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

ny

<b>Office Action Summary</b>	<b>Application No.</b> 09/811,059	<b>Applicant(s)</b> PROBST, MARKUS	
	<b>Examiner</b> Thanh X Luu	<b>Art Unit</b> 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office Action is in response to remarks filed March 25, 2004. Claims 27-56 are currently pending.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27, 28, 30-39, 41-43, 45-54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Figure 1), hereinafter AAPA, in view of Pientka (U.S. Patent 5,811,793).

Regarding claims 27, 28, 30-39, 41-43, 45-54 and 56, AAPA discloses (see Figure 1) an apparatus for performing scattered radiation measurements, comprising: an emitting device (1) for emitting radiation; a receiving device (2) for receiving radiation; a window having a first side presented towards the emitting and receiving devices and a second side bounding a volume of fluid (5), the window having a first window portion through which radiation emitted from the emitting device passes towards a target location that is spaced from the second side of the window and arrives at the target location along a first path, and the window also having a second window portion substantially coplanar with the first window portion and positioned so that radiation leaving the target location along a second path, which is at an angle of about 90 degrees to the first path, passes through the second window portion towards the

Art Unit: 2878

receiving device, and wherein the emitting device comprises a radiation source. AAPA does not specifically disclose a deflection element positioned to receive radiation from the radiation source and to deflect the radiation towards the first window portion.

Pientka teaches (see the Figure) a similar device having a deflection element (13) as claimed. Pientka further teaches (see the Figure) the deflection element is a reflecting prism having a spherical entry or exit surface and the radiation passing perpendicularly through the entry or exit surface. Also, Pientka teaches (see the Figure) radiation reflected in the interior of the deflection element and the entry or exit surface is curved such that radiation from the radiation source propagates in the deflection element parallel to the optical axis. In addition, Pientka teaches (see the Figure) third and fourth paths as claimed, and an optical deflection element to deflect radiation towards the radiation detector. Pientka further recognizes that such a deflection element allows for the device to provide a more compact configuration. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a deflection element as claimed in the apparatus of AAPA in view of Pientka to obtain a more compact configuration.

3. Claims 27, 39, 40, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Zanardelli (U.S. Patent 4,652,745).

Regarding claims 27, 39, 40, 54 and 55, AAPA discloses (see Figure 1) an apparatus for performing scattered radiation measurements, comprising: an emitting device (1) for emitting radiation; a receiving device (2) for receiving radiation; a window having a first side presented towards the emitting and receiving devices and a second

Art Unit: 2878

side bounding a volume of fluid (5), the window having a first window portion through which radiation emitted from the emitting device passes towards a target location that is spaced from the second side of the window and arrives at the target location along a first path, and the window also having a second window portion substantially coplanar with the first window portion and positioned so that radiation leaving the target location along a second path, which is at an angle of about 90 degrees to the first path, passes through the second window portion towards the receiving device, and wherein the emitting device comprises a radiation source. AAPA does not specifically disclose a deflection element positioned to receive radiation from the radiation source and to deflect the radiation towards the first window portion. Zanardelli teaches (see Figure 1) the deflection elements as claimed and the radiation source and detector are not in the same plane. Zanardelli further recognizes that such a deflection element allows for the device to provide a more compact configuration. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a deflection element as claimed in the apparatus of AAPA in view of Zanardelli to obtain a more compact configuration.

4. Claims 29 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Pientka, and further in view of Bendicks (U.S. Patent 5,278,425).

Regarding claims 29 and 44, and, AAPA and Pientka disclose the claimed invention as set forth above. AAPA and Pientka do not specifically disclose the deflection element having a nonplanar aspherical entry surface. Bendicks teaches (see Figure 1 and column 2, lines 56-61) providing a nonplanar aspherical entry surface.

Art Unit: 2878

Thus, Bendicks recognizes such a curved surface allows for better collimation. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a curved surface as claimed in the apparatus of AAPA in view of Pientka and Bendicks to improve collimation and improve detection.

### ***Response to Arguments***

5. Applicant's arguments filed March 25, 2004 have been fully considered but they are not persuasive.

Applicant asserts that Pientka and Zanardelli do not disclose the target spaced from a second side of the window. However, Examiner does not contend that Pientka and Zanardelli disclose such a limitation. As set forth above, AAPA discloses that the target is spaced from a second side of the window. Pientka and Zanardelli simply teach that an intermediate deflector can be used to bend the light path to provide a more compact configuration. Such a compact configuration is clearly shown from the figures and is routinely used. Thus, as set forth above, this rejection is proper.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

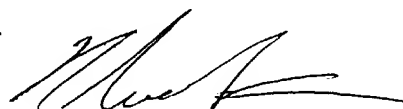
Art Unit: 2878

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X Luu whose telephone number is (571) 272-2441. The examiner can normally be reached on M-F (6:30-4:00) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh X Luu  
Primary Examiner  
Art Unit 2878

04/04